

WHAT IS CLAIMED IS:

1. A composition comprising a physiologically acceptable carrier and two or more agents encapsulated into a liposome.

5 2. The composition of claim 1, wherein the combination of the two or more agents comprises two or more drugs cytotoxic to tumor cells.

3. The composition of claim 1, wherein the combination of the two or more agents exhibits activity against parasites and insects.

4. The composition of claim 1, wherein the combination of the two or more agents exhibits activity against skin penetrating parasites and insects.

10 5. The composition of claim 1, wherein the combination of the two or more agents is for application to nails, hair, skin or lips.

6. The composition of claim 1, wherein the combination of the two or more agents is a cosmetic.

15 7. The composition of claim 1, wherein the combination of the two or more agents comprises one or more nutritional products.

8. The composition of claim 1, wherein the combination of the two or more agents is selected from the group consisting of drugs, nutritional supplements, vitamins, minerals, enzymes, hormones, proteins, and peptides.

20 9. The composition of claim 1, wherein the combination of the two or more agents comprises at least one or more appetite suppressants.

10. The composition of any of claims 1-9, wherein the liposome comprises cardiolipin.

11. The composition of claim 10, wherein the cardiolipin is natural cardiolipin or synthetic cardiolipin.

25 12. The composition of claim 10, wherein the cardiolipin comprises short-chain fatty acids.

13. The composition of claim 10, wherein the cardiolipin comprises long-chain fatty acids.

30 14. The composition of claim 10 wherein the liposome further comprises a phosphatidylcholine, cholesterol and α -tocopherol.

15. The composition of claim 10, wherein the liposome further comprises at least one of the lipids selected from the group of lipids consisting of phosphatidylcholine, phosphatidylethanolamine, phosphatidylserine, phosphatidylglycerol, phosphatidic acid, phosphatidylinositol, sphingomyelin, sterol, tocopherol, fatty acid,

35 dimyristoylphosphatidylcholine, dimyristoylphosphatidylglycerol, dioleoylphosphatidylglycerol, distearoylphosphatidyl choline, dioleoylphosphatidylcholine,

dipalmitoylphosphatidylcholine, diarachidonoyl phosphatidylcholine, hyrdrogenated soy phosphatidylcholine, and mixtures thereof.

16. The composition of claim 10, wherein the liposome further comprises a sterol selected from a group consisting of cholesterol, polyethylene glycol derivatives of 5 cholesterol, coprostanol, cholestanol, cholestane, cholesterol hemisuccinate, cholesterol sulfate and mixtures thereof.

17. The composition of claim 1, wherein the liposome bears a negative charge.

18. The composition of claim 1, wherein the liposome bears a positive charge.

19. The composition of claim 1, wherein the liposome is neutral.

10 20. The composition of claim 1, wherein the liposome comprises multilamellar vesicles.

21. The composition of claim 1, wherein the liposome comprises unilamellar vesicles.

15 22. The composition of claim 1, wherein at least one of the two or more agents is water-soluble, and at least one of the two or more agents is water-insoluble.

23. The composition of claim 1, wherein at least one of the two or more agents is water-soluble, and at least one of the two or more agents is hydrophobic.

24. The composition of claim 1, wherein each of the two or more agents is water-soluble.

20 25. The composition of claim 1, wherein each of the two or more agents is water-insoluble or hydrophobic.

26. The composition of claim 1, wherein at least one of the two or more agents is present in the aqueous cavity of the liposome, and at least one of the two or more agents is present in the lipid bilayer of the liposome.

25 27. The composition of claim 1, wherein each of the two or more agents is present in the aqueous cavity of the liposome.

28. The composition of claim 1, wherein each of the two or more agents is present in the lipid bilayer of the liposome.

29. The composition of claim 1, wherein at least one of the two or more agents is 30 selected from the group consisting of: 17 α -hydroxyprogesterone acetate, 17-S-estradiol, 19-norprogesterone, 5-fluorouracil, 5-irinotecan, acetazolamide, acetyl sulfisoxazole, adria, adriamycin, adriamycine, alclofenac, allopurinol, alprenolol, aluminum aspirin, aminocaproic acid, amitriptyline, amlodipine, amphetamine sulfate, amphotericin, amphotericin B, anisindone, herceptin, aspirin, atenolol, atropine sulfate, BCNU, bendroflumethiazide, benzamphetamine hydrochloride, bethanechol chloride, bleomycin, calcitonin, calcium gluconate, SN-38, capecitabine, carboplatin, cephalexin, cephalexin hydrochloride, cerubidine, chlordiazepoxide, chlormadinone acetate, chlormethine,

chloropromazine, chlorpromazine, chorionic gonadotropin, cimetidine, cisplatin, clonidine, colchicine, corticotrophin, cortisone acetate, cytarabine, cytoxan, cytoxin, daunomycin, daunorubicin, dexamethasone, betamethasone, diazepam, didanosine (ddl), difuinal, digoxin, dihydroxyphenylalanine, diltiazem, diphenadione erythrityl tetranitrate, 5 diphenidol, docetaxel, doctaxel, doxorubicin (including pegylated doxorubicin), EKI-569, enalapril, enalaprilat captopril, epirubicin, erythroxylaceae, erythromycin, erythroxylaceae, Erythroxylacease, ethinyl estradiol, ethinyl estradiol 3-methyl ether, etintidine, etoposide, extramustinephosphate, famotidine, felodipine, fenoprofen, fenufen, ferrous sulfate, flufenamic, fluprofen, flurbiprofen, follicle stimulating hormone, gallopamil, gemcitabine, 10 glucagon, gonadotropin releasing hormone, human growth hormone, methionine-human growth hormone, des-phenylalanine human growth hormone, bovine growth hormone, porcine growth hormone, insulin-like growth hormone, haloperidol, heparin, herceptin, histermine dihydrochloride, hydrochlorothiazide, hydrocorticosterone acetate, hydrocortisone, hydroxyurea, ibuprofen, idoxide, ifosfamide, imipramine, indomethacin, 15 indoprofen, insulin, insulin-like growth factor, α - interferon, β - interferon, γ -interferon, interferon α -2a, interferon α -2b, consensus interferon, interleukin-2, irinotecan, irinotecan sulindac, isofluorophate, isopropamide iodide, isoproterenol sulfate, isosorbide dinitrate, ketoprofen, leucovorin, leuprolide, levodopa, LHRH, lidoflazine, lisinopril, luteinizing hormone, lypressin, mandol, mannomustine, mecamylamine hydrochloride, meclizine 20 hydrochloride, mefenamic, melphalan, methacholine chloride, methamphetamine hydrochloride, methazolamide, methotrexate, methyldopa, methylphenidate hydrochloride, methyltestosterone, milrinone, minoxidil, mioflazine, mitobronitol, mitomycin, mitoxantrone, naproxen, nicardipine, nimodipine, nisoldipine, nitrendipine, nitroglycerin, nizatidine, norethiederone, norethindrone, norethisterone, norethynodrel, norgesterone, 25 norgestrel, oxaliplatin, oxytocin, paclitaxel, pancreas hormone releasing factor, pancreozymin, phenaglycodol, phenformin hydrochloride, phenmetrazine hydrochloride, phenoxybenzamine, pilocarpine hydrochloride, prednisolone, procainamide hydrochloride, prochlorperazine maleate, prochlorperazine edisylate, progestrone, prolactin, proleukin, propranolol, quanbenz, raltitrexed, ramipril, ranitidine, reltitrexed, renin, androgens, 30 estrogens, scopolamine bromide, bovine somatotropin, porcine somatotropin, stavudine (d4T), streptozotocin, sucralfate, sulindac, tamoxifen, taxol, tegafur, tetratolol, theophylline, theophylline choline, thiethylperazine maleate, thyroid stimulating hormone, thyrotropic hormone, tiapamil, timolol, tolazamide, tolmetin, topotecan, triamcinolone, tridihexethyl chloride, trifosfamide, uramustine, vasopressin, vinblastine, vincamine, vincristine, 35 vinorelbine, xanthins, and zomepirac, and a vaccine against influenza virus, pneumonia, hepatitis A, hepatitis B, hepatitis C, cholera toxin B-subunit, typhoid, plasmodium falciparum, diphtheria, tetanus, herpes simplex virus, tuberculosis, HIV, bordetella pertussis,

measles, mumps, rubella, bacterial toxoids, vaccinia virus, adenovirus, canary virus, bacillus calmette, Guerin, or klebsiella pneumonia.

30. The composition of claim 1, wherein at least one of the two or more agents is selected from the group consisting of: agents for treating Alzheimers or Parkinson's

5 disease, agents for treating Crohn's disease, agents for treating demyelinating diseases including multiple sclerosis, agents for treating rheumatology, analgesics, anastrozole, anesthetics, anoretics, anthracyclines, antiallergic agents, anti-arrhythmic agents, antibiotics, antibodies, anticoagulants, antidepressants, antidiabetic agents, anti-epilepsy agents, antifungal agents, anti-gout agents, antihypertensive agents, antiinflammatory agents,

10 antiinflammatory corticosteroids, anti-malarials, anti-migraine agents, antimuscarinic agents, anti-protozoal agents, antisense oligonucleotides, anti-thyroids, antiulcer agents, antiulcer drugs, anti-ulcer H2 receptor antagonists, antivirals, anxiolytics, agents for treating arthritis, bisphosphonates, bone morphogenic proteins, camptothecins, cardiac inotropic agents, cardiovascular agents, coagulation factors, corticosteroids, cosmetics, cox-2

15 inhibitors, cyclosporins, cytokines, derivatives of dexamethasone, dihydropyridines, diuretics, dopaminergic agents, fertility inhibitors, fertility promoters, gastrointestinal agents, glycoproteins, growth factors and hormones, derivatives of human grown hormone, hemostatics, histamine receptor antagonists, hypercholesterol agents, hypnotics, hypocalcemic agents, immunosuppressive agents, immunotoxins, agents for treating

20 inflammatory bowel disease, interferons, interleukins, kidney protective agents, LHRH agonists and antagonists, lipid regulating agents, lipoproteins, moisturizers, muscle relaxants, nephrotoxins, neuroleptics, neurotropic agents, nucleoproteins, nucleotides, oligonucleotides, enzymes, hormones, ophthalmic agents, opioid agonists and antagonists, parasympathomimetics, parathyroid and pituitary hormones, polynucleotides, polypeptides,

25 polysaccharides, prostaglandins, protease inhibitors, proteins, agents for treating psoriasis, retinoids, ribozymes, sedatives, sex hormones, somatostatin, somatotropins, steroids, stimulants, sympathomimetics, taxanes, terpenoids, thyroids, vaccines, and vasodilators.

31. The composition of claim 1, wherein at least one of the two or more agents is a polynucleotide.

30 32. The composition of claim 31, wherein the polynucleotide is a ribozyme, an interfering RNA (RNAi) or an antisense RNA or DNA sequence.

33. The composition of claim 1 or 32, wherein at least one of the two or more agents is an antisense oligonucleotide.

34. The composition of claim 33, wherein the antisense oligonucleotide is antisense to c-raf.

35. The composition of claim 2, wherein the two or more drugs are selected from the group consisting of paclitaxel, mitoxantrone, SN-38, doxorubicin, gemcitabine,

vinorelbine, c-raf antisense oligonucleotide (RafAON), carboplatin, irinotecan, raltitrexed, epirubicin, daunorubicin, cisplatin, topotecan, vinblastine, 5-fluorouracil, mitomycin, adriamycin, capecitabine, dotaxel, didanosine (ddl), stavudine (d4T), hydroxyurea, taxol, interleukin-2, histermine dihydrochloride, tamoxifen, herceptin, cytoxan, leucovorin, 5 oxaliplatin, anastrozole, proleukin, sulindac, EKI-569, and erythroxyllaceae.

36. The composition of claim 1, wherein the liposome comprises a c-raf antisense oligonucleotide (RafAON) and at least one drug selected from the group consisting of paclitaxel, mitoxantrone, SN-38, doxorubicin, gemcitabine, vinorelbine, vinblastine, cisplatin, 5-fluorouracil, mitomycin, and adriamycin.

37. The composition of claim 1, wherein the liposome comprises gemcitabine and at least one drug selected from the group consisting of cisplatin, carboplatin, paclitaxel, topotecan, doxorubicin, and vinorelbine.

38. The composition of claim 1, wherein the liposome is conjugated to a targeting agent that directs binding of the liposome to a tumor cell.

39. The composition of claim 38, wherein the targeting agent is a protein.

40. The composition of claim 39, wherein the protein is selected from the group of proteins consisting of antibodies, antibody fragments, peptides, peptide hormones, receptor ligands, and mixtures thereof.

41. The composition of claim 38, wherein the targeting agent is a carbohydrate.

42. A method of treating cancer in a mammalian host, comprising administering to the host a composition comprising: (i) a therapeutically effective amount of a liposome comprising a combination of two or more agents wherein the combination of the two or more agents comprises two or more drugs cytotoxic to tumor cells, and (ii) a physiologically acceptable carrier.

43. The method of claim 42, wherein the mammalian host is a human.

44. The method of claim 42, wherein the liposome comprises cardiolipin.

45. The method of claim 44, wherein the cardiolipin is natural cardiolipin or synthetic cardiolipin.

46. The method of claim 44, wherein the cardiolipin comprises short-chain fatty acids.

47. The method of claim 44, wherein the cardiolipin comprises long-chain fatty acids.

48. The method of claim 44 wherein the liposome further comprises a phosphatidylcholine, cholesterol and α -tocopherol.

49. The method of claim 44, wherein the liposome further comprises at least one of the lipids selected from the group of lipids consisting of phosphatidylcholine, phosphatidylethanolamine, phosphatidylserine, phosphatidylglycerol, phosphatidic acid,

phosphatidylinositol, sphingomyelin, sterol, tocopherol, fatty acid, dimyristoylphosphatidylcholine, dimyristoylphosphatidylglycerol, dioleoylphosphatidylglycerol, distearoylphosphatidyl choline, dioleoylphosphatidylcholine, dipalmitoylphosphatidylcholine, diarachidonoyl phosphatidylcholine, hyrdrogenated soy phosphatidylcholine, and mixtures thereof.

5 50. The method of claim 44, wherein the liposome further comprises a sterol selected from a group consisting of cholesterol, polyethylene glycol derivative of cholesterol, coprostanol, cholestanol, cholestane, cholesterol hemisuccinate, cholesterol sulfate and mixtures thereof.

10 51. The method of claim 42, wherein the liposome bears a negative charge.

52. The method of claim 42, wherein the liposome bears a positive charge.

53. The method of claim 42, wherein the liposome is neutral.

54. The method of claim 42, wherein the liposome comprises multilamellar vesicles.

15 55. The method of claim 42, wherein the liposome comprises unilamellar vesicles.

56. The method of claim 42, wherein at least one of the two or more agents is water-soluble, and at least one of the two or more drugs is water-insoluble.

20 57. The method of claim 42, wherein at least one of the two or more agents is water-soluble, and at least one of the two or more agents is hydrophobic.

58. The method of claim 42, wherein each of the two or more agents is water-soluble.

59. The method of claim 42, wherein each of the two or more agents is water-insoluble or hydrophobic.

25 60. The method of claim 42, wherein at least one of the two or more agents is present in the aqueous cavity of the liposome, and at least one of the two or more agents is present in the lipid bilayer of the liposome.

61. The method of claim 42, wherein each of the two or more agents is present in the aqueous cavity of the liposome.

30 62. The method of claim 42, wherein each of the two or more agents is present in the lipid bilayer of the liposome.

63. The method of claim 42, wherein the two or more drugs are selected from the group consisting of paclitaxel, mitoxantrone, SN-38, doxorubicin, gemcitabine, vinorelbine, c-raf antisense oligonucleotide (RafAON), carboplatin, irinotecan, raltitrexed, 35 epirubicin, daunorubicin, cisplatin, topotecan, vinblastine, 5-fluorouracil, mitomycin, adriamycin, capecitabine, docetaxel, didanosine (ddI), stavudine (d4T), hydroxyurea, taxol,

interleukin-2, histermine dihydrochloride, tamoxifen, herceptin, cytoxan, leucovorin, oxaliplatin, anastrozole, proleukin, sulindac, EKI-569, and erythrooxylaceae.

64. The method of claim 42, wherein the liposome comprises a c-raf antisense oligonucleotide (RafAON) and at least one drug selected from the group consisting of 5 paclitaxel, mitoxantrone, SN-38, doxorubicin, gemcitabine, vinorelbine, vinblastine, cisplatin, 5-flurouracil, mitomycin, and adriamycin.

65. The method of claim 42, wherein the liposome comprises gemcitabine and at least one drug selected from the group consisting of cisplatin, carboplatin, paclitaxel, topotecan, doxorubicin, and vinorelbine.

66. The method of claim 42, wherein the combination of two or more agents is used to treat lung cancer.

67. The method of claim 66, wherein the agents comprise paclitaxel and carboplatin.

68. The method of claim 42, wherein the combination of two or more agents is used to treat non-small cell lung carcinoma.

69. The method of claim 68, wherein the agents are selected from a group consisting of irinotecan, paclitaxel and carboplatin.

70. The method of claim 42, wherein the combination of two or more agents is used to treat urothelial carcinoma.

71. The method of claim 70, wherein the agents comprise gemcitabine and epirubicin.

72. The method of claim 42, wherein the combination of two or more agents is used to treat ovarian carcinoma.

73. The method of claim 72, wherein the agents are selected from a group consisting of gemcitabine, cisplatin, carboplatin, paclitaxel, topotecan, doxorubicin.

74. The method of claim 42, wherein the combination of two or more agents is used to treat melanoma.

75. The method of claim 74, wherein the agents are selected from a group consisting of interleukin-2, histermine dihydrochloride, tamoxifen and cisplatin.

76. The method of claim 42, wherein the combination of two or more agents is used to treat breast cancer.

77. The method of claim 75, wherein the agents are selected from a group consisting of herceptin, paclitaxel, adriamycin, cytoxin, anastrozole, tamoxifen and proleukin.

78. The method of claim 42, wherein the combination of two or more agents is used to treat colorectal cancer.

79. The method of claim 78, wherein the agents are selected from a group consisting of 5-flurouricil, leucovorin, oxaliplatin, 5-irinotecan, irinotecan, sulindac and EKI-569.

5 80. The method of claim 42 wherein the agents further comprise erythroxylacease and vinblastine.

81. The method of claim 42 or 44, wherein the liposome is conjugated to a targeting agent that directs binding of the liposome to a cell of the cancer.

82. The method of claim 81, wherein the targeting agent is a protein.

10 83. The method of claim 82, wherein the protein is selected from the group of proteins consisting of antibodies, antibody fragments, peptides, peptide hormones, receptor ligands, and mixtures thereof.

84. The method of claim 81, wherein the targeting agent is a carbohydrate.

85. The method of claim 42 or 44, wherein the liposome is administered dermally, orally, intravenously, or intratumorally.

15 86. A method of preparing liposomes containing a plurality of active agents formulating a liposomal preparation comprising at least one initial active agent and adding at least one additive active agent to said liposome preparation shortly prior to administration.

20 87. The method of claim 86, wherein the liposomal preparation comprising at least one initial active agent is in the form of a lyophilized cake, and the additive active agent is added to the cake by first dissolving or suspending the additive active agent in a hydrating solution, which is then added to the cake to reconstitute the liposomes.

88. The method of claim 86 or 87, wherein the initial active agent comprises Paclitaxel.

25 89. The method of claim 88, wherein the additive active agent comprises Mitoxantrone, anthracycline, or doxorubicin.

90. The method of claim 86 or 87, wherein the initial active agent comprises SN-38.

30 91. The method of claim 90, wherein the additive active agent comprises gemcitabine.

92. The method of claim 86 or 87, wherein the initial agent is an antisense oligonucleotide.

93. The method of claim 86 or 87, wherein the additive agent is an antisense oligonucleotide.

35 94. The method of claim 92 or 93, wherein the antisense oligonucleotide is antisense to c-raf.

95. The method of claim 86 or 87, wherein the initial agent or the additive agent is one or more agents selected from the group consisting of: 17 α -hydroxyprogesterone acetate, 17-S-estradiol, 19-norprogesterone, 5-fluorouracil, 5-irinotecan, acetazolamide, acetyl sulfisoxazole, adria, adriamycin, adriamycine, alclofenac, allopurinol, alprenolol, 5 aluminum aspirin, aminocaproic acid, amitriptyline, amlodipine, amphetamine sulfate, amphotericin, amphotericin B, anisindone, herceptin, aspirin, atenolol, atropine sulfate, BCNU, bendroflumethiazide, benzamphetamine hydrochloride, bethanechol chloride, bleomycin, calcitonin, calcium gluconate, SN-38, capecitabine, carboplatin, cephalexin, cephalexin hydrochloride, cerubidine, chlordiazepoxide, chlormadinone acetate, 10 chlormethine, chloropromazine, chorionic gonadotropin, cimetidine, cisplatin, clonidine, colchicine, corticotrophin, cortisone acetate, cytarabine, cytoxan, cytoxin, daunomycin, daunorubicin, dexamethasone, betamethasone, diazepam, didanosine (ddI), difuinal, digoxin, dihydroxyphenylalanine, diltiazem, diphenadione erythrityl tetranitrate, diphenidol, docetaxel, doxorubicin (including pegylated doxorubicin), 15 EKI-569, enalapril, enalaprilat, captopril, epirubicin, erythroxylaceae, erythromycin, erythroxylaceae, Erythroxylacease, ethinyl estradiol, ethinyl estradiol 3-methyl ether, etintidine, etoposide, extramustinephosphate, famotidine, felodipine, fenoprofen, fufen, ferrous sulfate, flufenamic, fluprofen, flurbiprofen, follicle stimulating hormone, gallopamil, gemcitabine, glucagon, gonadotropin releasing hormone, human growth 20 hormone, methione-human growth hormone, des-phenylalanine human growth hormone, bovine growth hormone, porcine growth hormone, insulin-like growth hormone, haloperidol, heparin, herceptin, histermine dihydrochloride, hydrochlorothiazide, hydrocorticosterone acetate, hydrocortisone, hydroxyurea, ibuprofen, idoxide, ifosfamide, imipramine, indomethacin, indoprofen, insulin, insulin-like growth factor, α - interferon, β - 25 interferon, γ -interferon, interferon α -2a, interferon α -2b, consensus interferon, interleukin-2, irinotecan, irinotecan sulindac, isofluorophate, isopropamide iodide, isoproterenol sulfate, isosorbide dinitrate, ketoprofen, leucovorin, leuprolide, levodopa, LHRH, lidoflazine, lisinopril, luteinizing hormone, lypressin, mandol, mannomustine, mecamylamine hydrochloride, meclizine hydrochloride, mefenamic, melphalan, methacholine chloride, 30 methamphetamine hydrochloride, methazolamide, methotrexate, methyldopa, methylphenidate hydrochloride, methyltestosterone, milrinone, minoxidil, mioflazine, mitobronitol, mitomycin, mitoxantrone, naproxen, nicardipine, nimodipine, nisoldipine, nitrendipine, nitroglycerin, nizatidine, norethiederone, norethindrone, norethisterone, 35 norethynodrel, norgesterone, norgestrel, oxaliplatin, oxytocin, paclitaxel, pancreas hormone releasing factor, pancreozymin, phenaglycodol, phenformin hydrochloride, phenmetrazine hydrochloride, phenoxybenzamine, pilocarpine hydrochloride, prednisolone, procainamide hydrochloride, prochlorperazine maleate, prochlorperazine edisylate, progesterone, prolactin,

proleukin, propranolol, quanbenz, raltitrexed, ramipril, ranitidine, reltitrexed, renin, androgens, estrogens, scopolamine bromide, bovine somatotropin, porcine somatotropin, stavudine (d4T), streptozotocin, sucralfate, sulindac, tamoxifen, taxol, tegafur, tetratolol, theophylline, theophylline cholate, thiethylperazine maleate, thyroid stimulating hormone, 5 thyrotropic hormone, tiapamil, timolol, tolazamide, tolmetin, topotecan, triamcinolone, tridihexethyl chloride, trifosamide, uramustine, vasopressin, vinblastine, vincamine, vincristine, vinorelbine, xanthins, and zomepirac, and a vaccine against influenza virus, pneumonia, hepatitis A, hepatitis B, hepatitis C, cholera toxin B-subunit, typhoid, 10 plasmodium falciparum, diphtheria, tetanus, herpes simplex virus, tuberculosis, HIV, bordetella pertusis, measles, mumps, rubella, bacterial toxoids, vaccinia virus, adenovirus, canary virus, bacillus calmette, Guerin, or klebsiella pneumonia.

96. The method of claim 86 or 87, wherein the initial agent or the additive agent is one or more agents selected from the group consisting of: agents for treating Alzheimers or Parkinson's disease, agents for treating Crohn's disease, agents for treating demyelinating 15 diseases including multiple sclerosis, agents for treating rheumatology, analgesics, anastrozole, anesthetics, anoretics, anthracyclines, antiallergic agents, anti-arrhythmic agents, antibiotics, antibodies, anticoagulants, antidepressants, antidiabetic agents, anti-epilepsy agents, antifungal agents, anti-gout agents, antihypertensive agents, antiinflammatory agents, antiinflammatory corticosteroids, anti-malarials, anti-migraine agents, 20 antimuscarinic agents, antiprotozoal agents, antisense oligonucleotides, anti-thyroids, antiulcer agents, antiulcer drugs, anti-ulcer H2 receptor antagonists, antivirals, anxiolytics, agents for treating arthritis, bisphosphonates, bone morphogenic proteins, camptothecins, cardiac inotropic agents, cardiovascular agents, coagulation factors, corticosteroids, cosmetics, cox-2 inhibitors, cyclosporins, cytokines, derivatives of dexamethasone, 25 dihydropyridines, diuretics, dopaminergic agents, fertility inhibitors, fertility promoters, gastrointestinal agents, glycoproteins, growth factors and hormones, derivatives of human grown hormone, hemostatics, histamine receptor antagonists, hypercholesterol agents, hypnotics, hypocalcemic agents, immunosuppressive agents, immunotoxins, agents for treating inflammatory bowel disease, interferons, interleukins, kidney protective agents, 30 LHRH agonists and antagonists, lipid regulating agents, lipoproteins, moisturizers, muscle relaxants, nephrotoxins, neuroleptics, neurotropic agents, nucleoproteins, nucleotides, oligonucleotides, enzymes, hormones, ophthalmic agents, opioid agonists and antagonists, parasympathomimetics, parathyroid and pituitary hormones, polynucleotides, polypeptides, polysaccharides, prostaglandins, protease inhibitors, proteins, agents for treating psoriasis, 35 retinoids, ribozymes, sedatives, sex hormones, somatostatin, somatotropins, steroids, stimulants, sympathomimetics, taxanes, terpenoids, thyroids, vaccines, and vasodilators.

97. The method of claim 86 or 87, wherein the initial agent or the additive agent is a polynucleotide.

98. The method of claim 97, wherein the polynucleotide is a ribozyme, an interfering RNA (RNAi) or an antisense RNA or DNA sequence.